



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,257	09/29/2003	John Cooper	1508	3194

23518 7590 03/15/2006

KEY SAFETY SYSTEMS, INC.
PATENT DEPARTMENT
7000 NINETEEN MILE ROAD
STERLING HEIGHTS, MI 48314

EXAMINER

ROSENBERG, LAURA B

ART UNIT	PAPER NUMBER
----------	--------------

3616

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/674,257	COOPER ET AL.	
	Examiner	Art Unit	
	Laura B. Rosenberg	3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3,4,6-8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3,4,6-8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed 19 December 2005, in which claims 3, 4, and 6 were amended, claims 1, 2, 5, and 9 were canceled, and claim 10 was added.

Claim Objections

2. Claim 1 is objected to because of the following informalities: "active positive" should be changed to --active position-- (line 9). Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8 recites the limitations "the first means" in line 1, and "the deactivation signal" in line 2. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3616

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 3, 6, 7, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Becker (6,593,735), and supported by Hock et al. (5,458,366). Becker discloses an occupant safety restraint system (best seen in its entirety in figure 1) able to protect an occupant during a vehicular crash, comprising:

- First occupant protection system (for example, including seat belt system) having at least one seat belt (not shown, but mentioned in column 6, line 56) able to be lockingly secured about the occupant, and including a seat belt buckle (not shown, but mentioned in column 6, line 56), having a locked and unlocked state (as sensed by seat belt buckle switch sensor #144), into which the seat belt is operationally locked
- Second occupant protection system (for example, including inflatable knee bolster #138) comprising a deployable knee bolster able to protect, when activated, at least a portion of the lower extremities of the occupant (inherent in inflatable knee bolsters), the knee bolster movable only once from a stored position to an active position upon sensing an accident (inflatable knee bolsters are typically only deployed once since they are inflatable; this concept is supported by Hock et al.'s inflatable knee bolster system #20, which can only be deployed once)
- Sensing system (including sensors #144) including a sensor (including seat belt buckle switch sensor) that senses whether the buckle is locked or unlocked and

generates a signal to the second occupant protection system to prevent the knee bolster from moving to the active position if the seat belt is operatively locked in the buckle (column 6, line 46-column 7, line 8), the sensor able to generate a deactivation signal on the latching of a seat belt tongue within the buckle (inherent in seat belt buckle switch sensors)

- Deactivation signal means responsive to the deactivation signal and able to deactivate the knee bolster (column 6, line 46-column 7, line 8)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hock et al. (5,458,366) in view of Cooper (6,494,284). Hock et al. disclose an occupant safety restraint system (best seen in its entirety in figure 1) able to protect an occupant (for example, #14) during a vehicular crash, comprising:

- Second occupant protection system (for example, including airbag knee bolster device #20) comprising a deployable knee bolster able to protect, when activated, at least a portion of the lower extremities of the occupant (best seen in dotted lines in figure 1), the knee bolster movable only once from a stored position to an active position upon sensing an accident (movable only once because the airbag is

Art Unit: 3616

deployable only once; appropriate sensor used to actuate inflator and deploy airbag, which moves knee bolster panel)

Hock et al. do not specifically disclose a seat belt system, or a connection between a seat belt system and the deployable knee bolster. Cooper teaches an occupant safety restraint system (best seen in figures 1, 7) comprising:

- First occupant protection system having at least one seat belt (not shown, but discussed in columns 8-9) able to be lockingly secured about an occupant, and including a seat belt buckle (not labeled, but can be seen in figure 7), having a locked and unlocked state (as sensed by seat belt buckle sensor #90), into which the seat belt is operationally locked
- Second occupant protection system comprising a deployable knee bolster (including knee bolster module; column 3, lines 37-48) able to protect a portion of the lower extremities of the occupant
- Sensing system (for example, including #68, 90) including a sensor (for example, including #90) that senses whether the buckle is locked or unlocked and generates a signal to the second occupant protection system to prevent the knee bolster from moving to the active position if the seat belt is operatively locked in the buckle (column 8, lines 40-45; column 9, lines 1-11), the sensor able to generate a deactivation signal on the latching of a seat belt tongue within the buckle (inherent in seat belt buckle sensors)

Art Unit: 3616

- Deactivation signal means responsive to the deactivation signal and able to deactivate the knee bolster (for example, suppression of occupant protection system discussed in columns 8-9)

It would have been obvious to one skilled in the art at the time that the invention was made to modify the system of Hock et al. such that it comprised seat belt buckle sensor and seat belt as claimed in view of the teachings of Cooper so as to better control the deployment of the knee bolster system to more optimally protect the vehicle occupant.

9. Claims 3, 4, 6, 7, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hock et al. (5,458,366) in view of Knox (6,918,458). Hock et al. disclose an occupant safety restraint system (best seen in its entirety in figure 1) able to protect an occupant (for example, #14) during a vehicular crash, comprising:

- Second occupant protection system (for example, including airbag knee bolster device #20) comprising a deployable knee bolster able to protect, when activated, at least a portion of the lower extremities of the occupant (best seen in dotted lines in figure 1), the knee bolster movable only once from a stored position to an active position upon sensing an accident (movable only once because the airbag is deployable only once; appropriate sensor used to actuate inflator and deploy airbag, which moves knee bolster panel)

Hock et al. do not specifically disclose a seat belt system, or a connection between a seat belt system and the deployable knee bolster. Knox teaches an occupant safety restraint system (including #10) comprising:

- First occupant protection system having a multi-point seat belt system (for example, can be seen in figures 11, 12) including at least one seat belt (for example, including #390) able to be lockingly secured about an occupant, and including a seat belt buckle (not shown, but part of buckle sensor), having a locked and unlocked state (as sensed by seat belt buckle sensor #34), into which the seat belt is operationally locked
- Second occupant protection system comprising a knee restraint (one example of a supplemental restraint, as discussed in column 1) able to protect a portion of the lower extremities of the occupant
- Sensing system (for example, including devices #30) including a sensor (for example, including #34) that senses whether the buckle is locked or unlocked and generates a signal to the second occupant protection system to prevent the supplement restraint from moving to the active position if the seat belt is operatively locked in the buckle (in combination with other sensor details; best explained in step 74 of enable/disable routine 70, column 4, and figure 4), the sensor able to generate a deactivation signal on the latching of a seat belt tongue within the buckle (column 3, lines 18-26)

Art Unit: 3616

- Deactivation signal means responsive to the deactivation signal and able to deactivate the knee bolster (depending upon feedback from other sensors; best explained in figure 4 and column 4-5)

It would have been obvious to one skilled in the art at the time that the invention was made to modify the system of Hock et al. such that it comprised seat belt buckle sensor and seat belt as claimed in view of the teachings of Knox so as to better control the deployment of the knee bolster system to more optimally protect the vehicle occupant.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hock et al. (5,458,366) in view of Knox (6,918,458), and further in view of Thomas et al. (6,520,537). Hock et al. do not disclose a lower leg proximity sensor able to generate a deactivation signal.

Thomas et al. teach an occupant safety restraint system (including various sensors and safety restraints illustrated in the drawings) comprising:

- First occupant protection system having at least one seat belt (not shown, but discussed in column 4, lines 57-60) able to be secured about an occupant
- Second occupant protection system (for example, including an air bag system)
- Sensor system (for example, including array of sensors and controller #166) able to deactivate the second occupant protection system based upon the operational state of the first occupant protection system (column 4, lines 57-60)

Art Unit: 3616

- Lower leg proximity sensor (for example, including sensor array #152) able to generate a deactivation signal (columns 6-7)

It would have been obvious to one skilled in the art at the time that the invention was made to modify the system of Hock et al. with the lower leg proximity sensor of Thomas et al. in order to more optimally deploy, or prevent deployment of, an occupant protection system based on the location of the vehicle occupant with respect to the occupant protection system (column 5, line 66-column 6, line 17).

Response to Arguments

11. Applicant's arguments with respect to claims 3, 4, 6-8, and 10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lang et al. disclose a deployable knee bolster.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not


Art Unit: 3616

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura B. Rosenberg whose telephone number is (571) 272-6674. The examiner can normally be reached on Monday-Friday 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura B Rosenberg
Patent Examiner
Art Unit 3616

LBR

 3/6/06
PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600